

# STANTON TERRITORIAL HEALTH AUTHORITY

## Yellowknife, Northwest Territories

<b>TITLE:</b> Newborn Puncture	<b>Revision Date:</b> 16-Nov-10	<b>Issue Date:</b> 16-Nov-10
<b>Document Number:</b> SCM20400	<b>Status:</b> <b>Approved</b>	
<b>Distribution:</b> Specimen Control Manual	<b>Page:</b> 1 of 5	
<b>Approved by:</b> C. Cooper, Manager of Diagnostic and Therapeutics	<b>Signed by:</b>	

### **PURPOSE:**

To collect a quality sample from the patient that allows for quality results to be provided to the physician in order to facilitate diagnosis and treatment of the patient.

### **POLICY:**

See Policy SCM20100 Blood Collection Guidelines.

### **SUPPLIES:**

- Gloves (optional)
- Lancet
- Gauze
- Microtainer™ Tubes and/or Filter Paper Cards (PKU) and/or Heparinized Capillary Tubes
- Alcohol Prep Pads
- Sharps Collector
- Heel Warmer or Warm Towel or Blanket (if required)

### **PROCEDURE INSTRUCTIONS:**

- Warming the infant's heel is essential for pH and Blood Gases.
- Warming the heel increases arterial blood flow to the site up to seven-fold.
- Temperature of the warming device should be no more than 42°C or risk burning the skin.






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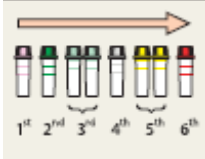


Follow the steps in the table below to perform a Newborn Puncture:

Step	Action	
1	Select a site as identified in the diagram. Cleanse site thoroughly with an Alcohol Prep Pad. Allow skin to air dry.	
2	With a gloved hand (optional), place the BD Quikheel™ Lancet against the site with the Quikheel logo facing you. Place the blade slot area securely against the heel. The incision can be placed at a 90° angle to the length of the foot or parallel to the length of the foot.	
3	Firmly and completely depress the trigger with your index finger.	
4	After triggering the lancet, remove the lancet and discard it into a biohazard sharps container.	
5	Gently wipe away the first drop of blood with gauze. Apply gentle pressure with the thumb and ease intermittently as drops of blood form. Be sure to apply pressure such that the incision is opened.	



Follow the steps in the table below to fill BD Microtainer™ Tubes:

Step	Action	
1	Obtain the necessary supplies. Confirm the identity of the newborn (I-0500 The Use of Two Patient Identifiers).	
2	Conduct the Newborn Puncture as outlined above.	

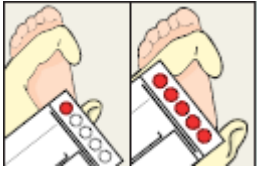

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<b>3</b>	<p>The order of draw for micro collection differs from that of venipuncture. If multiple specimens are to be collected, including EDTA specimens, the EDTA specimen is drawn first to ensure adequate volume and accurate hematology test results. Additive specimens are collected next. Specimens requiring serum are collected last.</p>	
<b>4</b>	<p>Collect the specimen with the Microtainer™ Tube by allowing the blood to run into the collection scoop while holding at a 30-45° angle. Ensure that the tube is not scraped over the puncture site.</p>	
<b>5</b>	<p>After the blood has been collected from the heel of the newborn, the foot should be elevated above the body. A gauze pad should be pressed against the puncture site until the bleeding stops. It is not advisable to apply adhesive bandages over skin puncture sites on newborns. Mix all tubes with the following inversions:</p> <p>EDTA, PST, Lithium Heparin, Glucose – 10 times SST – 5 times Serum – 0 times</p>	
<b>6</b>	<p>Label all samples at patient's side.</p>	



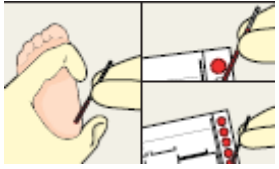
Follow the steps in the table below to complete a Filter Paper Card (PKU):

Step	Action	
<b>1</b>	<p>Ensure the filter paper card is not expired. Fill out all relevant information on the filter paper card prior to collection. Take precautions not to touch the filter paper while filling out the relevant information. Obtain the necessary supplies. Confirm the identity of the infant and ensure linkage with the demographic data on the card.</p>	
<b>2</b>	<p>Conduct the Newborn Puncture as outlined above.</p>	
<b>3</b>	<p>The filter paper should be touched gently against the large blood drop and, in one step, a sufficient quantity of blood allowed to soak through to completely fill a preprinted</p>	


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	circle on the filter paper. If not enough blood is present, repeat with other drop(s). The paper should not be pressed against the puncture site of the heel. Blood should only be applied to one side of the filter paper. Both sides of the filter paper should be examined to assure that the blood uniformly penetrated the saturated paper.	
<b>4</b>	After the blood has been collected from the heel of the newborn, the foot should be elevated above the body. A gauze pad should be pressed against the puncture site until the bleeding stops. It is not advisable to apply adhesive bandages over skin puncture sites on newborns.	
<b>5</b>	Allow filter paper to dry thoroughly on a horizontal, level, non-absorbant surface for three hours at ambient temperature and away from direct sunlight. Touching or smearing of blood on the filter paper must be avoided.	

Follow the steps in the table below to perform the Alternate Filter Paper Method:

Step	Action	
<b>1</b>	Ensure the filter paper card is not expired. Fill out all relevant information on the filter paper card prior to collection. Take precautions not to touch the filter paper while filling out the relevant information. Obtain the necessary supplies. Confirm the identity of the infant and ensure linkage with the demographic data on the card.	
<b>2</b>	Conduct the Newborn Puncture as outlined above.	
<b>3</b>	The tip of the heparinized capillary tube should be touched to the drop of blood formed at the heel puncture site. After filling the capillary tube to the calibration mark, the contents of the tube should be immediately applied to the center of a preprinted circle until it is filled completely. Continue until all the circles are filled. Blood should only be applied to one side of the filter paper. Both sides of the filter paper should be examined to assure that the blood uniformly penetrated the saturated paper.	

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<b>4</b>	<p>After the blood has been collected from the heel of the newborn, the foot should be elevated above the body. A gauze pad should be pressed against the puncture site until the bleeding stops. It is not advisable to apply adhesive bandages over skin puncture sites on newborns.</p>	
<b>5</b>	<p>Allow filter paper to dry thoroughly on a horizontal, level, non-absorbant surface for three hours at ambient temperature and away from direct sunlight. Touching or smearing of blood on the filter paper must be avoided.</p>	

**RELATED DOCUMENTS:**

- I-0500 The Use of Two Patient Identifiers
- SCM20500 Order of Draw Job AID
- SCM20300 Capillary Puncture Procedure

**REFERENCES:**

Beckton Dickinson and Company. (2002, September). *Newborn Capillary Blood Collection Methods Using the BD Quikheel Lancet*. Retrieved November 16, 2010, from BD Vacutainer Systems Preanalytical Solutions: <http://www.bd.com/vacutainer>

Stanton Territorial Health Authority. (2006). Blood Collection Guidelines. In *Laboratory Manual*. Yellowknife, NT.

**REVISION HISTORY:**

REVISION	DATE	Description of Change	REQUESTED BY
1.0	13Aug08	Initial Release	C.Russell
1.1	16Nov10	Update to New Format and Add Visual Aids	C.Russell

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